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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,022	04/14/2004	Pai-Hsueh Yang	01:1720-001700US	7477

20350 7590 11/22/2005

TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER

NGUYEN, HUNG

ART UNIT PAPER NUMBER

2851

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,022	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> Hung Henry V. Nguyen	<b>Art Unit</b> 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 16, 17, 21, 22 and 26-30 is/are rejected.
- 7) ☒ Claim(s) 13-15, 18-20 and 23-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/19/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings submitted April 14, 2004 is considered as informal drawings (see figures 2B and 7-11). Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-10, 12, 16-17, 21-22 and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwamoto et al (U.S.Pat. 5,521,036).

With respect to claims 1, 16 and 21, 26-29, Iwamoto discloses an exposure system and corresponding method of controlling movement of one or more stages of a precision assembly to process a substrate (W) having a plurality of process regions/shot regions (see figures 7-8), and comprising all of the limitations of the instant claims such as: a radiation energy (1) for exposing a substrate, a position compensation module (57-65) configured to generated learning data such

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as shot map data for one or more representative process regions (SA) for each block of a plurality of blocks of a substrate (W), each block including one or more process regions; and a stage control module (18) configured to use the generated learning data/shot map data of the one or more representative process regions of each block to control movement of the wafer stage to process the block of one or more process regions of the substrate (see col.14, lines 1-14).

With respect to claims 10, 12 and 17, Iwamoto et al teaches the positioning compensation module including a data storing unit (61) and a calculation unit (59) for performing an iterative learning control process on iterative learning control input data that is selected from the group of a following positional error of the one of more stages and a force command of the one of more stages (see col.13, lines 22-46).

As to claims 2-9, Iwamoto et al discloses the blocks having at least one center block (SA56) in the center region of the substrate and at least one edge block (SA11) in an edge region of the substrate and center block is larger in area than each edge block (SA16); and wherein the blocks comprise a block having a plurality of process regions selected from a row of process regions along a stepping direction and transverse to a scanning direction from a step and scan processing of the substrate (see figures 7-13).

As to claims 21-22 and 30, a code for generating learning data, and a code for using the generated learning data are seen to be inherent teachings in existence of the system and method of Iwamoto as set forth above.

***Allowable Subject Matter***

4. Claims 11, 13-15, 18-20 and 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record either alone or in combination, neither discloses nor makes obvious the combination of a system and corresponding method of controlling movement of one or more stages of a precision assembly to process a substrate having a plurality of process regions comprising a position compensation module with particular functions as recited in the instant claims of the present invention.

***Prior Art Made of Record***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwamoto et al (U.S.Pat. 5,448,333) and Kotoku (US 2003/0037878 A1) teach systems and corresponding method for controlling the movement of the substrate stage in accordance with predetermined exposure positions of a plurality of shot areas arranged on the substrate

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V. Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Hung Henry V Nguyen', with a long horizontal flourish extending to the right.

**Hung Henry V Nguyen**  
**Primary Examiner**  
**Art Unit 2851**

hvn  
11/16/05